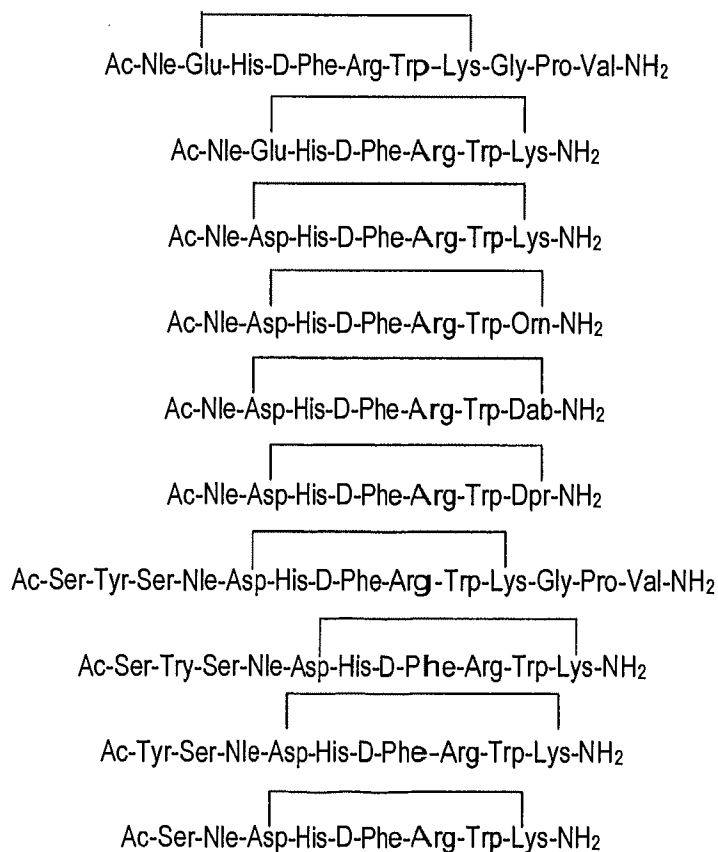


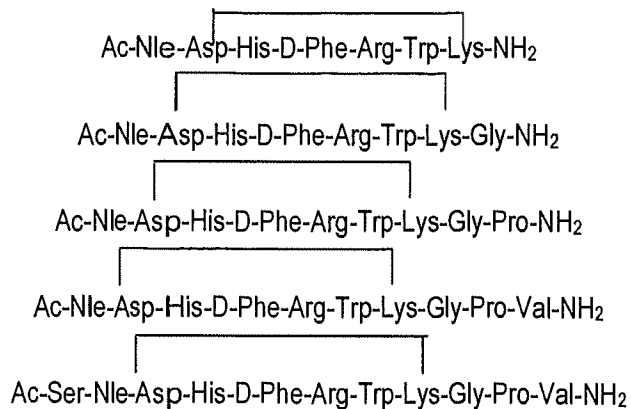
CLAIMS:

1. A method for inducing melanogenesis in a human subject having an MC1R variant allele associated with loss of or diminished receptor function, which comprises the steps of administering to said subject an amount of an α -MSH analogue effective to induce melanogenesis by the melanocytes in the skin or other epidermal tissue of the subject.
2. The method of claim 1, wherein the α -MSH analogue is selected from:
 - (a) compounds of the formula:
Ac-Ser-Tyr-Ser-M-Gln-His-D-Phe-Arg-Trp-Gly-Lys-Pro-Val-NH₂
wherein M is Met, Nle or Lys; and
 - (b) compounds of the formula:
R₁-W-X-Y-Z-R₂
wherein
R₁ is Ac-Gly-, Ac-Met-Glu, Ac-Nle-Glu-, or Ac-Tyr-Glu-;
W is -His- or -D-His-;
X is -Phe-, -D-Phe-, -Tyr-, -D-Tyr-, or -(pNO₂)D-Phe⁷-;
Y is -Arg- or -D-Arg-;
Z is -Trp- or -D-Trp-; and
R₂ is -NH₂; -Gly-NH₂; or -Gly-Lys-NH₂.
3. The method of claim 1, wherein the α -MSH analogue is a cyclic analogue wherein an intramolecular interaction exists (1) between the amino acid residue at position 4 and an amino acid residue at position 10 or 11, and/or (2) between the amino acid residue at position 5 and the amino acid residue at position 10 or 11.
4. The method of claim 3, wherein the intramolecular interaction is a disulfide bond or other covalent bond.
5. The method of claim 1, wherein the α -MSH analogue is selected from the group consisting of:
Ac-Ser-Tyr-Ser-Nle-Glu-His-D-Phe-Arg-Trp-Lys-Gly-Pro-Val-NH₂
Ac-Ser-Tyr-Ser-Nle-Asp-His-D-Phe-Arg-Trp-Lys-Gly-Pro-Val-NH₂

Ac-Nle-Glu-His-D-Phe-Arg-Trp-Lys-Gly-Pro-Val-NH₂
Ac-Nle-Asp-His-D-Phe-Arg-Trp-Lys-Gly-Pro-Val-NH₂
Ac-Nle-Asp-His-D-Phe-Arg-Trp-Gly-NH₂
Ac-Nle-Glu-His-D-Phe-Arg-Trp-Lys-NH₂
Ac-Nle-Asp-His-D-Phe-Arg-Trp-Lys-NH₂
Ac-Nle-Glu-His-D-Phe-Arg-Trp-Orn-NH₂
Ac-Nle-Asp-His-D-Phe-Arg-Trp-Orn-NH₂
Ac-Nle-Glu-His-D-Phe-Arg-Trp-Dab-NH₂
Ac-Nle-Asp-His-D-Phe-Arg-Trp-Dab-NH₂
Ac-Nle-Glu-His-D-Phe-Arg-Trp-Dpr-NH₂
Ac-Nle-Glu-His-Phe-Arg-Trp-Lys-NH₂
Ac-Nle-Asp-His-Phe-Arg-Trp-Lys-NH₂

6. The method of claim 1, wherein the α -MSH analogue is selected from the group consisting of:





7. The method of claim 1, wherein the α -MSH analogue is

[D-Phe⁷]- α -MSH,

[Nle⁴, D-Phe⁷]- α -MSH,

[D-Ser¹, D-Phe⁷]- α -MSH,

[D-Tyr², D-Phe⁷]- α -MSH,

[D-Ser³, D-Phe⁷]- α -MSH,

[D-Met⁴, D-Phe⁷]- α -MSH,

[D-Glu⁵, D-Phe⁷]- α -MSH,

[D-His⁶, D-Phe⁷]- α -MSH,

[D-Phe⁷, D-Arg⁸]- α -MSH,

[D-Phe⁷, D-Trp⁹]- α -MSH,

[D-Phe⁷, D-Lys¹¹]- α -MSH,

[D-Phe⁷, D-Pro¹²]- α -MSH,

[D-Phe⁷, D-Val¹³]- α -MSH,

[D-Ser¹, Nle⁴, D-Phe⁷]- α -MSH,

[D-Tyr², Nle⁴, D-Phe⁷]- α -MSH,

[D-Ser³, Nle⁴, D-Phe⁷]- α -MSH,

[Nle⁴, D-Glu⁵, D-Phe⁷]- α -MSH,

[Nle⁴, D-His⁶, D-Phe⁷]- α -MSH,

[Nle⁴, D-Phe⁷, D-Arg⁸]-α-MSH,

[Nle⁴, D-Phe⁷, D-Trp⁹]-α-MSH,

[Nle⁴, D-Phe⁷, D-Lys¹¹]-α-MSH,

[Nle⁴, D-Phe⁷, D-Pro¹²]-α-MSH,

[Nle⁴, D-Phe⁷, D-Val¹³]-α-MSH,

[Cys⁴, Cys¹⁰]-α-MSH

[Cys⁴, D-Phe⁷, Cys¹⁰]-α-MSH

[Cys⁴, Cys¹¹]-α-MSH

[Cys⁵, Cys¹⁰]-α-MSH

[Cys⁵, Cys¹¹]-α-MSH

[Cys⁴, Cys¹⁰]-α-MSH₄₋₁₃

[Cys⁴, Cys¹⁰]-α-MSH₄₋₁₂

[Nle⁴, D-Phe⁷]-α-MSH₄₋₁₀,

[Nle⁴, D-Phe⁷]-α-MSH₄₋₁₁,

[D-Phe⁷]-α-MSH₅₋₁₁,

[Nle⁴, D-Tyr⁷]-α-MSH₄₋₁₁,

[(pNO₂)D-Phe⁷]-α-MSH₄₋₁₁,

[Tyr⁴, D-Phe⁷]-α-MSH₄₋₁₀,

[Tyr⁴, D-Phe⁷]-α-MSH₄₋₁₁,

[Nle⁴]-α-MSH₄₋₁₁,

[Nle⁴, (pNO₂)D-Phe⁷]-α-MSH₄₋₁₁,

[Nle⁴, D-His⁶]-α-MSH₄₋₁₁,

[Nle⁴, D-His⁶, D-Phe⁷]-α-MSH₄₋₁₁,

[Nle⁴, D-Arg⁸]-α-MSH₄₋₁₁,

[Nle⁴, D-Trp⁹]-α-MSH₄₋₁₁,

[Nle⁴, D-Phe⁷, D-Trp⁹]- α -MSH₄₋₁₁,

[Nle⁴, D-Phe⁷]- α -MSH₄₋₉, or

[Nle⁴, D-Phe⁷, D-Trp⁹]- α -MSH₄₋₉.

8. The method of claim 1, wherein the α -MSH analogue is
[Nle⁴, D-Phe⁷]- α -MSH₄₋₁₀,
[Nle⁴, D-Phe⁷]- α -MSH₄₋₁₁,
[Nle⁴, D-Phe⁷, D-Trp⁹]- α -MSH₄₋₁₁, or
[Nle⁴, D-Phe⁷]- α -MSH₄₋₉.
9. The method of claim 1, wherein the α -MSH analogue is [Nle⁴, D-Phe⁷]- α -MSH.
10. Use of an α -MSH analogue in the manufacture of a preparation for inducing melanogenesis in a human subject having an MC1R variant allele associated with loss of or diminished receptor function.